

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY

REGION III  
1650 Arch Street  
Philadelphia, PA 19103-2029

REGION V  
77 West Jackson Boulevard  
Chicago, IL 60604

IN THE MATTER OF:

E.I. du Pont de Nemours and Company  
1007 Market Street  
Wilmington, DE 19898

Respondent.

Washington Works Facility  
Route 892 South  
Washington, WV 26181

ORDER ON CONSENT

Proceeding under Section 1431(a)(1)  
of the Safe Drinking Water Act,  
42 U.S.C. § 300i(a)(1)

Docket Nos. SDWA-03-  
SDWA-05-

I. STATUTORY AUTHORITY

1. This Order on Consent ("Order") is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency ("EPA") by Section 1431(a)(1) of the Safe Drinking Water Act ("SDWA" or "the Act"), 42 U.S.C. § 300i(a)(1), and supersedes the Order on Consent (Docket Nos. SDWA-03-2007-0039-DS and SDWA-05-2007-001) issued on November 20, 2006.

2. The authority to issue this Order was delegated to the Regional Administrators by Delegation No. 9-17, dated May 11, 1994.

3. Under the SDWA, Congress has authorized EPA to exercise broad authority for the protection of public health from contaminants entering a public water system or an underground source of drinking water.

II. STIPULATIONS

4. E.I. du Pont de Nemours and Company ("DuPont") consents to EPA's jurisdiction to issue this Order. DuPont does not admit to the EPA Findings in this Order.

5. DuPont waives any defenses it might have as to jurisdiction and venue and agrees not to contest any of the findings of fact or conclusions of law herein in any action to enforce this Order. Except as to any proceeding brought by EPA to enforce this Order, in agreeing to this Order, DuPont makes no admission of fact or law and reserves all rights and defenses available regarding liability or responsibility in any other legal proceeding related to the subject matter of this Order. DuPont further waives any rights to appeal this Order that would be otherwise applicable under the SDWA.

### III. DEFINITIONS AND BACKGROUND

6. "Contaminant" means "any physical, chemical, biological, or radiological substance or matter in water." See 42 U.S.C. § 300f(6).

7. The term "underground source of drinking water" ("USDW") means an aquifer or a portion thereof which supplies a public water system ("PWS"), or which contains a sufficient quantity of ground water to supply a PWS and which currently supplies drinking water for human consumption, or contains fewer than 10,000 milligrams per liter total dissolved solids, and is not an exempted aquifer. See 40 C.F.R. § 144.3.

8. C-8, for purposes of this Order, is perfluorooctanoic acid, CAS # 335-67-1 (PFOA) and its salts, including ammonium perfluorooctanoate, CAS # 3825-26-1 (APFO). These are man-made perfluorinated compounds that do not occur naturally in the environment.

9. The term "day" means calendar day. When a stated time expires on a Saturday, Sunday or Federal Holiday, the stated time period shall be extended to include the next business day.

10. Micrograms per liter ( $\mu\text{g/l}$ ) is the same as parts per billion (ppb).

11. The term "source water" shall mean water prior to any kind of treatment.

12. A "public water system," hereafter "PWS," provides piped drinking water for human consumption to persons within the meaning of Section 1401 (4) of the Act, 42 U.S.C. §300f(4) and 40 CFR §141.2.

13. A private water system is used by individual residents, or serves less than 25 persons per year from a well or other surface or ground water source and is otherwise not a "PWS."

14. The term "finished water" shall mean water that has passed through all the processes in a system's water treatment plant and is ready to be delivered to consumers.

### IV. EPA FINDINGS

15. DuPont is a corporation and is therefore a "person" within the meaning of Section 1401(12) of the SDWA, 42 U.S.C. § 300f(12).



24. Provisional Health Advisory values reflect reasonable, health-based hazard concentrations above which action should be taken to reduce exposure to PFOA in drinking water.<sup>3</sup>

25. Sampling conducted through the GIS Team effort since 2001, and by DuPont, has detected C-8 in private and public drinking water sources in Ohio and West Virginia at concentrations ranging from below the limits of quantitation up to 21.1 ppb.<sup>4</sup> As set forth in more detail in paragraphs 26, 27 & 28, DuPont has already taken measures to address PFOA in drinking water at or above 0.50 ppb.

26. The 2006 Order achieved comprehensive identification of private and public water systems in the vicinity of the Facility and ensured alternate water and/or treatment was offered, installed, and maintained at all public and private water systems that exceeded 0.50 ppb of C-8 in their finished water.

27. Prior to the 2006 Order, DuPont had offered a granular activated carbon water treatment ("GAC Treatment") at two public water systems that contained levels of C-8 that exceeded 0.50 ppb in their finished water. Those public water systems are the Little Hocking Water Association ("Little Hocking"), located in Ohio, and the Lubeck Public Service District ("Lubeck"), located in West Virginia. Upon acceptance of the offer and completion of construction, DuPont has provided for operation and maintenance of GAC Treatment at Little Hocking and Lubeck pursuant to the 2006 Order.

28. Initiating prior to and continuing pursuant to the 2006 Order, DuPont has offered to either connect to a public water system or install GAC Treatment to owners of residences using private water systems for which data have demonstrated levels of C-8 at or above 0.50 ppb in their finished water. DuPont has either connected to a public water system or has installed and is operating GAC Treatment at approximately 50 private water systems with finished water that exceeded 0.50 ppb of C-8 and whose owners have accepted DuPont's offer.

29. To date, approximately four owners of private water systems in the vicinity of the Facility with finished water that exceeds 0.50 ppb of C-8 have declined or not responded to DuPont's offer for installation of treatment or connection to a public water system.

30. With the issuance of the Provisional Health Advisory for PFOA, EPA has identified additional geographic areas in the vicinity of the Facility where USDWs may contain C-8 at concentrations at or above 0.40 ppb.

---

3 Id.

4 Hartten, Andrew S., Project Director, DuPont, "Amended 3Q05, and 4Q05 and 1Q06 Residential Sampling Results, West Virginia and Ohio DuPont Washington Works, Washington, WV (EPA Docket ID Number OPPT 2004-0113 PFOA Site-Related Environmental Assessment Program," submitted to Chad Board, West Virginia Department of Environmental Protection (April 5, 2006).



40. State and local authorities rely on the expertise and resources of EPA to review and evaluate unregulated contaminants. The WVDEP, WVDHHR, OEPA, the Ohio Department of Health ("ODH"), and local authorities are relying on the EPA to establish a Site-Specific Action Level for C-8 in drinking water that reduces exposure to C-8 for residents in the vicinity of the Facility. State agency actions taken to date, including actions taken by WVDEP, WVDHHR, OEPA, and ODH, have been based on the Site-Specific Action Level of 0.50 ppb established in the 2006 Order.

41. EPA has consulted with WVDEP, WVDHHR, OEPA, and ODH to confirm that the information upon which this Order is based is correct. The WVDEP, WVDHHR, OEPA, and ODH have requested that EPA take this action. Therefore, all requisite conditions have been satisfied for EPA action under Section 1431(a)(1) of the SDWA, 42 U.S.C. § 300i(a)(1).

#### V. ORDER ON CONSENT

42. Pursuant to the authority given to the EPA Administrator by Section 1431(a)(1) of the SDWA, 42 U.S.C. § 300i(a)(1), and delegated to the Regional Administrators, DuPont is ORDERED and hereby consents to the following:

- a) Temporary Provision of Alternate Drinking Water. For those private water systems where existing validated data demonstrates levels of C-8 at or above 0.40 ppb in their finished water, DuPont shall provide an alternate drinking water supply as soon as practicable, but in any event no later than fourteen (14) days after the execution of this Order. Where DuPont conducts a water system survey pursuant to Paragraphs 42(e) or (f) and identifies private and public water systems where the level of C-8 in the finished water is at or above 0.40 ppb, DuPont shall provide an alternate drinking water supply as soon as practicable, but in any event no later than thirty (30) days, from the receipt of validated data. An "alternate drinking water supply" shall mean: water from some other source, acceptable to EPA, that meets the water quality requirements of 40 C.F.R. Part 141 and has a level of C-8 less than 0.40 ppb in finished water where applicable; is in sufficient quantity for drinking and cooking; and is provided in a manner convenient to the users. DuPont shall continue to provide an alternate drinking water supply until it can fully implement the permanent remedies described *infra* pursuant to Paragraph 42 of this Order or the resident declines the offer or is non-responsive to the offer of treatment (as determined by EPA). DuPont shall be responsible for all costs of the provision of alternate drinking water.
- b) Private Water Systems Receiving Treatment. For private water systems at which DuPont has already installed GAC Treatment, DuPont shall provide for operation and maintenance of each GAC Treatment system in good working order, including but not limited to timely replacement of carbon filters, until it demonstrates to the satisfaction of EPA that the source prior to GAC Treatment

contains less than 0.40 ppb of C-8 for four consecutive quarters, or the conditions of Paragraph 46 have been met. DuPont may also elect to satisfy any ongoing obligation under this Paragraph by connecting a particular location to a public water system that contains less than 0.40 ppb of C-8 in finished water.

- c) Public Water Systems Receiving Treatment. For public water systems, at which DuPont has already installed GAC Treatment, DuPont shall provide for operation and maintenance of each GAC Treatment system in good working order, including but not limited to timely carbon bed changes, until it demonstrates to the satisfaction of EPA that the source water in the system prior to GAC Treatment contains less than 0.40 ppb of C-8 for four consecutive quarters, or the conditions of Paragraph 46 have been met.
- d) Action at Private Water Systems Based On Existing Data. For those private water systems where existing validated data demonstrates levels of C-8 at or above 0.40 ppb in their finished water, DuPont shall, within fourteen (14) days of execution of this Order, submit to EPA for approval, and to WVDHHR, WVDEP, OEPA, and ODH for review, a written Water Treatment Plan for each of these water systems in accordance with the provisions of Paragraph 42(g).
- e) Survey and Identification of Additional Private and Public Water Systems. For geographical areas defined by EPA (upon consultation with West Virginia and Ohio), DuPont shall conduct a water system survey and where any private or public water system (not already sampled) is identified, monitor the finished and source waters for the presence of C-8. DuPont shall notify EPA of monitoring results immediately, but in any event no later than 7 days, after the data are finalized through DuPont's internal data quality control/quality assurance procedures. DuPont shall also notify owners or operators of private and public water systems of monitoring results within 7-10 days after the data are finalized through DuPont's internal data quality control/quality assurance procedures.
- f) Newly Activated or Permitted Water Systems. Upon notification by EPA of any newly activated public water system or any newly constructed/permitted/put into use private water system that conforms to state and local code and is located in the geographical areas defined by EPA (upon consultation with West Virginia and Ohio), DuPont shall monitor the finished and source waters for the presence of C-8 in accordance with the provisions of Paragraph 42(e). On the anniversary date of the effective date of this Order and annually thereafter, DuPont shall survey the geographical areas defined by EPA for any new private or public water systems until DuPont demonstrates to the satisfaction of EPA that the USDWs in these geographical areas (or a subset of those areas) contain less than 0.40 ppb of C-8 for four consecutive quarters, or the conditions of Paragraph 46 have been met. DuPont shall monitor the finished and source

waters of any new systems for the presence of C-8 in accordance with the provisions of Paragraph 42(e).

- g) Water Treatment Plan. If any additional private or public water systems covered by this Order contain C-8 at or above 0.40 ppb in their finished water, DuPont shall, within 30 days of receipt of validated data, submit to EPA for approval, and to WVDHHR, WVDEP, OEPA, and ODH for review, a written Water Treatment Plan for each of these water systems. DuPont shall perform all monitoring using a reliable procedure published in the scientific literature by Moody,<sup>7</sup> MPI (formerly known as Exygen Research),<sup>8</sup> other equivalent publication or an EPA approved analytical method. The Water Treatment Plan shall include:
- i. a written offer to install and provide for operation and maintenance of GAC Treatment (including a draft operation and maintenance agreement);
  - ii. identification of anticipated necessary permits;
  - iii. a schedule for design and implementation of the GAC Treatment system; and
  - iv. identification of technical and other information needed from the owner or operator of the water source in order for DuPont to design and install the system.
- h) Implementation of Water Treatment Plan. Following approval from EPA, DuPont shall implement the Water Treatment Plan for any additional water system whose owner or operator accepts DuPont's offer. DuPont shall act with all deliberate speed to design treatment, seek necessary regulatory permits, and install GAC Treatment or an alternative approved by EPA. If an owner or operator of a water system rejects DuPont's offer, either through express rejection or silence, DuPont shall inform EPA of this rejection and provide documentation.
- i) DuPont's Operation and Maintenance Obligations. DuPont has or will execute operation and maintenance agreements ("O&M Agreements") with each water system owner or operator who has accepted the offer for treatment. DuPont will provide for operation and maintenance of the GAC Treatment or an alternative

---

7 Moody, C.A.; Kwan, W.C.; Martin, J.; Muir, D.C.G. & Mabury, S.A., "Determination of Perfluorinated Surfactants in Surface Water Samples by Two Independent Analytical Techniques: Liquid Chromatography/Tandem Mass Spectrometry 19F NMR," *Anal. Chem.* vol. 73, pp. 2200-2206 (2001).

8 Risha, K.; Flaherty, J.; Wille, R.; Buck, W.; Morandi, F. & Isemura, T., "Method for Trace Level Analysis of C-8, C-9, C-10, C-11, and C-13 Perfluorocarbon Carboxylic Acids in Water," *Anal. Chem.*, vol. 77, pp. 1503-1508 (2005).



approved by EPA consistent with the specific terms of these O&M Agreements until it demonstrates to the satisfaction of EPA that the water system's source water prior to treatment is less than 0.40 ppb of C-8 for four consecutive quarters, or the conditions of Paragraph 46 have been met.

- j) Follow-up Monitoring. After GAC Treatment is terminated, DuPont shall monitor annually the source water at EPA-specified public and private water systems for a period of five (5) years.

43. Progress Reports. DuPont shall submit Progress Reports as follows:

- a) Beginning April 1, 2009, and quarterly thereafter, DuPont shall submit to EPA, WVDHHR, WVDEP, OEPA and ODH written reports summarizing all actions taken in response to Paragraph 42 herein ("Progress Reports"). This reporting requirement shall remain in effect until DuPont submits a written request to EPA to submit Progress Reports on an annual basis and EPA approves such a request. DuPont shall continue to submit Progress Reports until such time as EPA provides written notice that the reports are no longer necessary, or this Order is terminated.

- b) All Progress Reports required by this Paragraph shall contain the following certification, which shall be signed by a responsible corporate officer:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- c) For purposes of this Order, a responsible corporate official shall be:

(A) a president, secretary, treasurer, or vice-president of DuPont in charge of a principal business function, or any other person who performs similar policy or decision-making functions for DuPont; or

(B) the manager of DuPont's Washington Works, West Virginia Facility, so long as authority to sign documents has been delegated in writing to the manager in accordance with corporate procedures.

## VI. GENERAL PROVISIONS

44. The Administrative Record to this Order is incorporated herein by reference.
45. Nothing in this Order is intended to supersede, impede, interfere with or otherwise affect the development of an MCL or other regulatory limit for C-8 that may be established by EPA through its regulatory processes in the future.
46. The Site-Specific Action Level identified in this Order for C-8 in drinking water is a temporary value that will be re-evaluated when EPA determines a reference dose under TSCA or establishes a drinking water standard for C-8, whichever comes first.
47. Notwithstanding any other provision of this Order, the EPA reserves the right to modify the Site-Specific Action Level identified in this Order if information previously unknown to EPA is received and EPA determines that this previously unknown information, together with any other relevant information, indicates that the Site-Specific Action Level may not be protective of human health, and DuPont reserves all rights and defenses should EPA take action under this Paragraph.
48. All submissions, including Progress Reports, required under this Order shall be submitted to the following addressees:

As to EPA:

Roger Reinhart  
Groundwater and Enforcement Branch  
U.S. EPA Region III  
1650 Arch Street (3WP22)  
Philadelphia, PA 19103-2029  
Ryan Bahr  
Ground Water and Drinking Water Branch  
U.S. EPA Region V  
77 West Jackson Boulevard (WG-15J)  
Chicago, IL 60604

As to WVDHHR:

Walter Ivey, Director  
Division of Environmental Engineering  
Office of Environmental Health Services  
Dept. of Health and Human Resources  
Capital and Washington Streets  
One Davis Square, Suite 200  
Charleston, WV 25301-1798

As to WVDEP:

William Timmermeyer  
Groundwater Protection Section  
Division of Water and Waste Management  
W.Va. Dept. of Environmental Protection  
601 57th Street, SE  
Charleston, WV 25304

As to OEPA:

Mike Baker, Chief  
Division of Drinking and Ground Waters  
Ohio EPA  
122 South Front Street  
Columbus, OH 43214

As to ODH:

W. Gene Phillips, RS, Bureau Chief  
Bureau of Environmental Health  
Ohio Department of Health  
246 North High Street  
P.O. Box 118  
Columbus, OH 43216

49. This Order shall apply to and be binding upon DuPont and its agents, successors and assigns.

50. Nothing in this Order shall be construed as prohibiting, altering or in any way eliminating the ability of EPA to seek any other remedies or sanctions available by virtue of DuPont's violations of this Order or of the statutes and regulations upon which this Order is based or for DuPont's violation of any applicable provision of law.

51. This Order shall not relieve DuPont of its obligation to comply with all applicable provisions of federal, state or local law, nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state or local permit.

52. Nothing in this Order is intended to nor shall be construed to operate in any way to resolve any criminal liability of DuPont. Compliance with this Order shall not be a defense to any actions subsequently commenced for any violation of federal laws and regulations administered by EPA, and it is the responsibility of DuPont to comply with such laws and regulations. EPA reserves the right to undertake action against any person, including DuPont,

in response to any condition which EPA determines may present an imminent and substantial endangerment to the public health, public welfare or the environment.

53. The undersigned representative of DuPont certifies that he or she is fully authorized by DuPont to enter into the terms and conditions of this Order and to execute and legally bind DuPont to it.

54. Pursuant to Section 1431(b) of the SDWA, 42 U.S.C. § 300i(b), and the Adjustment of Civil Monetary Penalties for Inflation, 40 C.F.R. Part 19, as revised (74 Fed. Reg. 626 (Jan. 7, 2009)), the violation of any term of this Order, or failure or refusal to comply with this Order, may subject DuPont to a civil penalty not to exceed \$16,500 for each day in which such violation occurs or failure to comply continues.

55. When DuPont knows or should have known, by the exercise of due diligence, of an event that might delay completion of any requirement of this Order, DuPont shall provide notice to EPA, in writing, within two (2) business days after DuPont first knew, or in the exercise of due diligence, should have known, of such event. The notice shall describe in detail the basis for the delay, including whether it is a *force majeure* event, and describe the length of, precise cause(s) of, and measures taken or to be taken to prevent or minimize such delay. If EPA agrees that such event constitutes *force majeure*, EPA shall extend the time for performance of such requirement, in writing, to compensate for the delay caused by the *force majeure* event. DuPont's failure to notify in writing in accordance with this Paragraph shall render this Paragraph void and of no effect concerning such event. For purposes of this Order, *force majeure* is defined as an event arising from causes beyond the control of DuPont, and any entity controlled by DuPont, which delays or prevents the performance of any obligation under this Order. Unanticipated or increased costs or expenses associated with implementation of this Order and changed financial circumstances shall not, in any event, be considered *force majeure* events. In addition, failure to apply for a required permit or approval or to provide in a timely manner all information required to obtain a permit or approval that is necessary to meet the requirements of this Order, or to obtain or approve contracts, shall not, in any event, constitute *force majeure* events.

56. This Consent Order may be executed in any number of counterpart originals, each of which shall be deemed to constitute an original agreement, and all of which shall constitute one agreement. The execution of one counterpart by any party shall have the same force and effect as if that party had signed all other counterparts.

57. All of the terms and conditions of this Order together comprise one agreement, and each of the terms and conditions is in consideration of all of the other terms and conditions. In the event that this Order is not executed by all of the signatories in identical form, or is not approved in such identical form by the Regional Administrators, then the entire Order shall be null and void.

58. The effective date of this Order is the date on which, after approval by the Regional Administrators, this Order is filed with the Regional Hearing Clerks of both Region III and Region V, if not, then on the same day.

59. This Order shall remain in effect until DuPont fulfills its obligations pursuant to Paragraphs 42 and 43 herein, submits a written request to EPA to terminate this Order, and EPA approves such termination request.

60. This Order constitutes final agency action.

SO ORDERED:

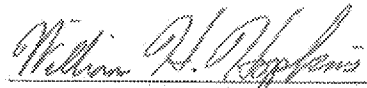
\_\_\_\_\_  
William T. Wisniewski  
Acting Regional Administrator  
U.S. Environmental Protection Agency,  
Region III

Date: \_\_\_\_\_

\_\_\_\_\_  
Bharat Mathur  
Acting Regional Administrator  
U.S. Environmental Protection Agency,  
Region V

Date: \_\_\_\_\_

AGREED TO:



William H. Hopkins

Plant Manager, Washington Works Facility

E.I. du Pont de Nemours and Company, Incorporated

Date: 3/5/2009